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BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 25, July - September 1976

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DARPA Order No. 3097, Amendment 2

March 31, 1977

DARPA Order No. 3097, Amendment 2
Program Code No. 7L10, Program Element Code 62711E
Name of Contractor:
Informatics Inc.
Effective Date of Contract:
January 3, 1977
Contract Expiration Date:
March 31, 1977
Amount of Contract: \$59,790

Contract No. MDA-903-77C-0153
Principal Investigator:
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Short Title of Work:
"Soviet Lasers"

This research was supported by the Defense Advanced Research Projects Agency and was monitored by the Defense Supply Service - Washington, under Contract No. MDA-903-77C-0153. The views and conclusions contained in this document are those of the author and should not be interpreted as necessarily representing the official policies, either express or implied, of the Defense Advanced Research Projects Agency or the United States Government.

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, No. 25, <i>Number 25,</i> JULY - SEPTEMBER 1976		5. TYPE OF REPORT & PERIOD COVERED Scientific ... Interim
7. AUTHOR(s) Stuart G. Hibben, Carl Minkus		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Informatics Inc. 6000 Executive Boulevard Rockville, Maryland 20852		8. CONTRACT OR GRANT NUMBER(s) MDA-903-77C-0153 <i>DARPA Order 3097</i>
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency/TAO 1400 Wilson Boulevard Arlington, Virginia 22209		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS DARPA Order No. 3097 Amdt. 2. Program Code No. 7L10, Prog. El. Code 62711E
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Defense Supply Service - Washington Room 1D245, Pentagon Washington, D. C. 20310		12. REPORT DATE March 31, 1977
		13. NUMBER OF PAGES 103 <i>127 pp.</i>
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
16. DISTRIBUTION STATEMENT (of this Report) <i>31 MLR 77</i> Approved for public release; distribution unlimited.		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES <i>387-113</i>		
19. KEY WORDS Solid State Lasers, Liquid Lasers, Gas Lasers, Chemical Lasers, Laser Components, Nonlinear Optics, Spectroscopy of Laser Materials, Ultrashort Pulse Generation, Crystal Growing, UV Lasers, X-Ray Lasers, Laser Theory, Laser Biological Effects, Laser Communications, Laser Computer Technology, Holography, Laser Chemical Effects, Laser Measurement Applications, Laser Parameters, Laser Beam-Target Interaction, Laser Plasma		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This is the Soviet Laser Bibliography for the third quarter of 1976 and is No. 25 in the series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; computer technology; holography; laser-induced chemical reactions; instrumentation and measurements; beam-target interaction; and plasma generation and diagnostics.		

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Introduction

This bibliography has been compiled by the staff of Informatics Inc. in response to a continuing contractual assignment to monitor current Soviet-bloc developments in the quantum electronics field. Of all material reviewed, the major yield has been from the approximately 30 periodicals which are known to report the most advanced and interesting findings in Soviet laser technology.

The period covered is the third quarter of 1976, and includes all significant laser-related articles received by us during that interval. The structure and selection criteria are basically those used in the preceding reports.

For convenience we have abbreviated frequently cited source names; a source abbreviation list is included. Unless indicated by a parenthesized (RZh, KL) notation, all cited sources are available at Informatics Inc. The numbers in parentheses following the authors' names in the text refer to the Cumulative Affiliations List which includes all author affiliations from 1969 to the present.

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I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

Krivoshchekov, G. V., V. K. Makukha, V. M. Semibalamut, and V. S. Smirnov (345). Solid state ring laser with an external signal. KE, no. 8, 1976, 1782-1792.

Leontovich, A. M., A. V. Milinkevich, A. M. Mozharovskiy, A. Yu. Orlov, V. A. Savva, A. M. Samson, and L. K. Slivka (1). Self-modulation of a giant ruby laser pulse at low temperature. KE, no. 9, 1976, 1914-1918.

Stroganov, V. I., and V. I. Verbovskiy (10). Ruby laser with variable radiation losses. ZhTF, no. 8, 1976, 1690-1692.

2. Crystal: Rare-Earth Activated

a. Nd³⁺

Dianov, Ye. M., S. K. Isayev, L. S. Korniyenko, N. V. Kravtsov, and V. V. Firsov (0). Lightguide laser. IN: Sb 1, 55. (RZhRadiot, 9/76, 9Yell16)

Gamal, K., G. Yelinkova, A. Novotny, and M. Vrbova (0). High brilliance YAG:Nd laser. IN: Sb 1, 57. (RZhRadiot, 9/76, 9Yell17)

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Melkonyan, A. A., A. A. Nazaryan, T. A. Papazyan, and K. I. Pokhsranyan (0). Study of the characteristics of a quasi c-w YAG:Nd³⁺ laser at high pumping levels. IN: Sb 1, 64. (RZhRadiot, 9/76, 9Yell5)

b. Er³⁺

Basiyev, T. T., Ye. V. Zharikov, V. I. Zhekov, T. M. Murina, V. V. Osiko, A. M. Prokhorov, B. P. Starikov, M. I. Timoshechkin, and I. A. Shcherbakov (1). Radiative and radiationless transitions of Er³⁺ in mixed yttrium-erbium-aluminum garnets. KE, no. 7, 1976, 1471-1477.

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Ryabov, S. G., and L. K. Gavrilov (0). Current status and trends in the development of solid state lasers. Pribory i sistemy upravleniya, no. 3, 1976, 13-17. (RZhF, 7/76, 7D1121)

4. Semiconductor: Simple Junction

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Bogatov, A. P., P. G. Yelisseyev, and V. V. Mamutin (1). Effect of excess current carriers on the dielectric permittivity at the radiative transition frequency in injection lasers. KE, no. 7, 1976, 1609-1611.

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b. InSb

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c. InAs

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Time characteristics of the radiation in an Nd:glass laser with
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9/76, 9Ye107)

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Yu. I. Kruzhilin, V. K. Orlov, S. V. Troshkin, and V. S.
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Alimov, O. K., T. T. Basiyev, and Yu. K. Voron'ko (0). Luminescence and energy migration in silicate glass activated by Eu^{3+} under monochromatic laser excitation. IN: Sb 1, 63. (RZhRadiot, 9/76, 9Ye113)

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1. Simple Mixures

a. He-Ne

Akchurin, G. G., V. M. Bokov, and V. V. Tuchin (0). Energy characteristics of an He-Ne laser during modulation of the discharge current. RiE, no. 8, 1976, 1669-1674.

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2. Molecular Beam and Ion

a. CO_2

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II. LASER APPLICATIONS

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G. BEAM-TARGET INTERACTION

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IV. SOURCE ABBREVIATIONS

APP	-	Acta physica polonica
BAPS	-	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
DAN SSSR	-	Akademiya nauk SSSR. Doklady
DAN Tadzh	-	Akademiya Tadzhikskoy SSR. Doklady
DBAN	-	Bulgarska akademiya na naukite. Doklady
FAiO	-	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	-	Fizika gorennya i vzryva
FiKhOM	-	Fizika i khimiya obrabotka materialov
FTP	-	Fizika i tekhnika poluprovodnikov
FTT	-	Fizika tverdogo tela
GiK	-	Geodeziya i kartografiya
IAN Arm	-	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	-	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	-	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IT	-	Izmeritel'naya tekhnika
IVUZ Fiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	-	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	-	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	-	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	-	Kvantovaya elektronika
KL	-	Knizhnaya letopis'
LC	-	Received at Library of Congress
NM	-	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy

OiS	-	Optika i spektroskopiya
OMP	-	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	-	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PTE	-	Pribory i tekhnika eksperimenta
RiE	-	Radiotekhnika i elektronika
RZhF	-	Referativnyy zhurnal. Fizika
RZhGeofiz	-	Referativnyy zhurnal. Geofizika
RZhKh	-	Referativnyy zhurnal. Khimiya
RZhMekh	-	Referativnyy zhurnal. Mekhanika
RZhRadiot	-	Referativnyy zhurnal. Radiotekhnika
Sb1	-	Sbornik. Vsesoyuznaya konferentsiya po kogerentnoy i nelineynoy optike. 7th. 1976. Tezisy dokladov, v. 1. Tbilisi, Metsniyereba, 1976.
Sb2	-	Vsesoyuznoye soveshchaniye po inzhenernym problemam upravlyayemogo termoyadernogo sinteza, Leningrad, 1974. Doklady, v. 4. Leningrad, 1975.
Sb3	-	Sovremennyye zadachi v tochnykh naukakh, no. 1, Universitet druzhby narodov, Moskva, 1975.
Sb4	-	Itogi nauki i tekhniki. Radiotekhnika, no. 9, 1976.
Sb5	-	Aerofizicheskiye issledovaniya, no. 5, Novosibirsk, 1975.
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TVT	-	Teplofizika vysokikh temperatur
UFN	-	Uspekhi fizicheskikh nauk
UFZh	-	Ukrainskiy fizicheskiy zhurnal
ZhETF	-	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	-	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	-	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	-	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	-	Zhurnal prikladnoy spektroskopii
ZhTF	-	Zhurnal tekhnicheskoy fiziki
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183. Physico-technical Institute, AN BSSR (Fiziko-tekhnicheskiy institut AN BSSR).
184. Institute of Geochemistry and Analytical Chemistry im. Vernadskiy, AN SSSR, Moscow (Institut geokhimii i analiticheskoy khimii im Vernadskogo AN SSSR).
185. Gor'kiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut).
186. Kishinev Pedagogical Institute (Kishinevskiy pedagogicheskiy institut).
187. Institute of Epidemiology and Microbiology im. Garmey, AMN SSSR, Moscow (Institut epidemiologii i mikrobiologii im Garmey AMN SSSR).
188. All Union Scientific Research Institute of Single Crystals, Khar'kov (VNI monokristallov).
189. Novocherkassk Polytechnic Institute (Novocherkasskiy politekhnicheskiy institut).
190. Central Scientific Research Institute of the Maritime Fleet (Tsentral'nyy NII morskogo flota).
191. Karaganda Polytechnic Institute (Karagandinskiy politekhnicheskiy institut).
192. Belorussian Technological Institute (Belorusskiy tekhnologicheskiy institut).
193. Institute of Theoretical and Applied Mechanics, Siberian Branch, AN SSSR, Novosibirsk (Institut teoreticheskoy i prikladnoy mekhaniki SOAN).
194. VIOGEM
195. Northwest Correspondence Polytechnic Institute (Severo-Zapadnyy zaочnyy politekhnicheskiy institut).
196. Institute of Organic Chemistry im. Zelinskiy, AN SSSR (Institut organicheskoy khimii im Zelinskogo AN SSSR).
197. Tomsk Polytechnic Institute (Tomskiy politekhnicheskiy institut).
198. Institute of Mineral Fuels, Moscow (Institut goryuchikh iskopayemykh).
199. Moscow Institute of Electronic Machinery (Moskovskiy institut elektronnoy mashinostroyeniya).
200. Khar'kov Aviation Institute (Khar'kovskiy aviatsionnyy institut).
201. Institute for Problems of Information Transmission, AN SSSR, Moscow (Institut problem peredachi informatsii AN SSSR).
202. Institute of Electronics, AN UzSSR, Tashkent (Institut elektroniki AN UzSSR).
203. Institute of General and Inorganic Chemistry, AN ArmSSR, Yerevan (Institut obshchey i neorganicheskoy khimii AN ArmSSR).
204. Institute of General Genetics, AN SSSR, Moscow (Institut obshchey genetiki AN SSSR).
205. Moscow X-ray Radiological Scientific Research Institute (Moskovskiy NI rentgeno-radiologicheskiy institut).
206. Institute of Geology and Geophysics, Siberian Branch, AN SSSR, Novosibirsk (Institut geologii i geofiziki SOAN).
207. Main Geophysical Observatory (Glavnaya geofizicheskaya observatoriya).
208. Tula Polytechnic Institute (Tul'skiy politekhnicheskiy institut).
209. Moscow Institute of Precision Mechanics and Computer Technology (Moskovskiy institut tochnoy mekhaniki i vychislitel'noy tekhniki).
210. Institute of Physics, Siberian Branch, AN SSSR (Institut fiziki SOAN).
211. Kalinin Polytechnic Institute (Kalininskiy politekhnicheskiy institut).
212. Kuban' State University (Kubanskiy gos universitet).
213. Leningrad Technological Institute (Leningradskiy tekhnologicheskiy institut).
214. Kazan' Pedagogical Institute (Kazanskiy pedagogicheskiy institut).
215. Physico-technical Institute, AN TadzhSSR (Fiziko-tekhnicheskiy institut AN TadzhSSR).
216. Kazan' Aviation Institute (Kazanskiy aviatsionnyy institut).
217. Poltava Civil Engineering Institute (Poltavskiy inzhenerno-stroitel'nyy institut).
218. Second Moscow State Medical Institute im. Pirogov (Vtoroy Moskovskiy meditsinskiy institut im Pirogova).

219. Belorussian Polytechnic Institute, Minsk (Belorusskiy politekhnicheskiy institut).
220. Institute of Experimental Meteorology (Institut eksperimental'noy meteorologii).
221. All Union Scientific Research Institute of Hydraulic Engineering (VNI gidrotekhniki).
222. Institute of Surgery im. Vishnevskiy, AMN SSSR (Institut khirurgii im Vishnevskogo AMN SSSR).
223. Central Institute for the Advanced Training of Physicians (Tsentral'nyy institut usovershenstvovaniya vrachey).
224. Yerevan Polytechnic Institute (Yerevanskiy politekhnicheskiy institut).
225. Institute for Problems of Oncology, AN UkrSSR (Institut problem onkologii AN UkrSSR).
226. Leningrad Branch of the Mathematical Institute, AN SSSR (Leningradskoye otdeleniye Matematicheskogo instituta AN SSSR).
227. Tashkent State University (Tashkentskiy gos universitet).
228. Institute of Theoretical Physics, AN UkrSSR (Institut teoreticheskoy fiziki AN UkrSSR).
229. Moscow Aviation Technological Institute (Moskovskiy aviatsionnyy tekhnologicheskoy institut).
230. Novosibirsk Institute for Engineers of Geodesy, Aerial Surveying and Cartography (Novosibirskiy institut inzhenerov geodezii, aerofoto"yemki i kartografii).
231. Scientific Research Institute of Motion Pictures and Photography (NI kinofotoinstitut, NIKFI).
232. State Scientific Research Institute of Glass (Gosudarstvennyy NII stekla).
233. Ivanovo-Frankov Pedagogical Institute (Ivanovo-Frankovskiy pedagogicheskoy institut).
234. Scientific Research Institute of Civil Aviation (NII grazhdanskoy aviatsii).
235. Tashkent State Pedagogical Institute (Tashkentskiy gos pedagogicheskoy institut).
236. All Union Scientific Research Institute of Mining Geomechanics and Surveying (VNI gornoy geomekhaniki i marksheyderskogo dela).
237. Department of the Physics of Nondestructive Control, AN BSSR (Otdel fiziki nerazrushayushchego kontrolya AN BSSR).
238. Institute of High Pressure Physics, AN SSSR (Institut fiziki vysokikh davleniy AN SSSR).
239. All Union State Planning, Surveying and Scientific Research Institute of Power Systems and Electric Power Networks (Vsesoyuznyy gosudarstvennyy proyektno-izyskatel'skiy i NII energeticheskikh sistem i elektricheskikh setey, ENERGOSET'PROYEKT).
240. Odessa State University (Odesskiy gos universitet).
241. Sverdlovsk State Pedagogical Institute (Sverdlovskiy gos pedagogicheskoy institut).
242. Kazakh State University, Alma Ata (Kazakhskiy gos universitet).
243. Radio Engineering Institute, AN SSSR (Radiotekhnicheskiy institut AN SSSR).
244. Moscow Scientific Research Institute of Television (Moskovskiy NI televizionnyy institut).
245. Novosibirsk State Pedagogical Institute (Novosibirskiy gos pedagogicheskoy institut).
246. Main Astronomical Laboratory, AN SSSR (Glavnaya astronomicheskaya laboratoriya AN SSSR).
247. Scientific Research Institute of Electrophysical Equipment im. Yefremov, Leningrad (NII elektrofizicheskoy apparatury im Yefremova).
248. Institute of Mechanics at Moscow State University (Institut mekhaniki pri Moskovskom gos universitete).
249. Omsk Agricultural Institute (Omskiy sel'skokhozyaystvennyy institut).
250. Sverdlovsk Mining Institute (Sverdlovskiy gornyy institut).
251. Tomsk Institute of Automatic Control Systems and Radioelectronics (Tomskiy institut avtomatizirovannykh sistem upravleniya i radioelektroniki).
252. Leningrad Institute of Nuclear Physics, AN SSSR (Leningradskiy institut yadernoy fiziki AN SSSR).
253. Kirghiz State University (Kirgizskiy gos universitet).
254. Moscow Civil Engineering Institute (Moskovskiy inzhenerno-stroitel'skiy institut).
255. Tallinn Polytechnical Institute (Tallinskiy politekhnicheskiy institut).

256. Far Eastern State University, Vladivostok (Dal'nevostochnyy gos universitet).
257. Comprehensive Institute of Natural Sciences, AN UzSSR, Nukus (Kompleksnyy institut yestestvennykh nauk AN UzSSR).
258. Institut of Theoretical Astronomy, AN SSSR (Institut teoreticheskoy astronomii AN SSSR).
259. Institut of Physics and Mathematics, AN LitSSR (Institut fiziki i matematiki AN LitSSR).
260. Kazan' Institute of Chemical Technology im. Kirov (Kazanskiy khimiko-tekhnologicheskoy institut im Kirova).
261. Rybinsk Evening Technological Institute (Rybinskiy vecherniy tekhnologicheskoy institut).
262. Physicotechnical Institute, AN UzSSR (Fiziko-tekhnicheskoy institut AN UzSSR).
263. Astrophysical Institute, AN KazSSR (Astrofizicheskoy institut AN KazSSR).
264. Institute of Radiophysics and Electronics, AN ArmSSR (Institut radiofiziki i elektroniki AN ArmSSR).
265. Irkutsk Polytechnical Institute (Irkutskiy politekhnicheskoy institut).
266. Leningrad Forestry-Technical Academy (Leningradskaya lesnotekhnicheskaya akademiya).
267. Laboratory of Electronics, AN BSSR, Minsk (Laboratoriya elektroniki AN BSSR).
268. Scientific Research Institute of Applied Mathematics and Mechanics at Tomsk State University (NII prikladnoy matematiki i mekhaniki pri Tomskom gos universitete).
269. Dnepropetrovsk Metallurgical Institute, Zaporozh'ye Branch (Dnepropetrovskiy metallurgicheskoy institut, Zaporozhskiy filial).
270. Special Astrophysical Observatory, AN SSSR, Leningrad Branch (Spetsial'naya astrofizicheskaya observatoriya AN SSSR, Leningradskiy filial).
271. Ul'yanovsk State Pedagogical Institute im Ul'yanov (Ul'yanovskiy gos pedagogicheskoy institut im Ul'yanova).
272. Military Engineering Radio Engineering Academy of Air Defense im Govorov (Voyenno-inzhenernaya radiotekhnicheskaya akademiya protivovozdushnoy oborony im Govorova).
273. Military Command Academy of Air Defense (Voyennaya komandnaya akademiya protivovozdushnoy oborony).
274. Donetsk Physico-technical Institute, AN UkrSSR (Donetskoy fiziko-tekhnicheskoy institut AN UkrSSR).
275. Moscow Electrotechnical Institute of Communications (Moskovskiy elektrotekhnicheskoy institut svyazi).
276. Institute of Physics of the Earth im. Shmidt, AN SSSR (Institut fiziki Zemli im. Shmidta AN SSSR).
277. Leningrad Institute of Aviation Instruments (Leningradskiy institut aviatsionnogo priborostroyeniya).
278. Samarkand State University (Samarkandskiy gos universitet).
279. Moscow Institute of the Petrochemical and Gas Industry im. Gubkin (Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im Gubkina).
280. Moscow Scientific Research Institute of Eye Diseases im. Gel'mgol'ts (Moskovskiy NII glaznykh bolezney im. Gel'mgol'tsa).
281. Institute for Improving the Qualifications of Supervisory Workers and Specialists (Institut povysheniya kvalifikatsii rukovodyashchikh rabotnikov i spetsialistov).
282. Scientific Research Institute of Physics, Odessa (NII fiziki, Odessa).
283. Institute of Physics of Metals, AN UkrSSR, Kiev (Institut metallofiziki AN UkrSSR).
284. Dnepropetrovsk Metallurgical Institute (Dnepropetrovskiy metallurgicheskoy institut).
285. Institute of Problems of Control (Institut problem upravleniya).
286. Institute of Biological Physics, ANSSSR, Pushchino (Institut biologicheskoy fiziki AN SSSR).
287. Institute of Physical Chemistry, AN SSSR (Institut fizicheskoy khimii AN SSSR).
288. Moscow Electrovacuum Instruments Plant (Moskovskiy zavod elektrovakuumnykh priborov).
289. Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography (Tsentral'nyy NII geodezii, aeros'yemki i kartografii).
290. All Union Scientific Research Institute of Medical Instrument Manufacture (VNII meditsinskogo priborostroyeniya).

291. Rostov-on-Don Institute of Railroad Transportation Engineers (Rostovskiy-na-Donu inzhenerov zheleznodorozhnogo transporta).
292. Naval Academy, Leningrad (Voyenno-morskaya akademiya).
293. Moscow Institute of Transportation Engineers (Moskovskiy institut inzhenerov transporta).
294. Institute of Chemistry, Bashkir Branch, AN SSSR (Institut khimii Bashkirskego filiala AN SSSR).
295. Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR, Novosibirsk (Institut khimicheskoy kinetiki i goreniya SOAN).
296. Tbilis Branch of the All Union Correspondence Electrotechnical Institute of Communications (Tbilisskiy filial Vsesoyuznogo zaobnogo elektrotekhnicheskogo instituta svyazi).
297. Institute of Chemistry, AN SSSR, Gor'kiy (Institut khimii AN SSSR).
298. Institute of Electrodynamics, AN UkrSSR (Institut elektrodinamiki AN UkrSSR).
299. Institute of Electronics, AN BSSR (Institut elektroniki AN BSSR).
300. Institute of Cybernetics, AN UzSSR (Institut kibernetiki AN UzSSR).
301. All Union Scientific Research Institute of Luminophors and High Purity substances (VNI lyuminoforov i osobo chistyykh veshchestv).
302. State Scientific Research Institute of Radio (Gosudarstvennyy NII radio).
303. L'vov Branch of Mathematical Physics of the Institute of Mathematics, AN UkrSSR (L'vovskiy filial matematicheskoy fiziki Instituta matematiki AN UkrSSR).
304. Institute of Organic Chemistry, AN UkrSSR, Kiev (Institut organicheskoy khimii AN UkrSSR).
305. Central Construction Bureau of Motion Picture Equipment (Tsentral'noye konstruktorskoye byuro kinoapparatury).
306. State Oceanographic Institute (Gosudarstvennyy okeanograficheskiy institut).
307. Institute of Thermophysics and Electrophysics, AN EstSSR (Institut termofiziki i elektrofiziki AN EstSSR).
308. Moscow Institute of Railroad Transport Engineers (Moskovskiy institut inzhenerov zheleznodorozhnogo transporta).
309. Pervomayskugol' combine (Kombinat "Pervomayskugol").
310. Kadiyevka Branch of the Kommunarok Mining-Metallurgical Institute (Kadiyevskiy filial Kommunarskogo gorno-metallurgicheskogo instituta).
311. All Union Scientific Research Institute of Mineral Resources, Moscow (VNI mineral'nogo syr'ya).
312. Kiev Institute of Civil Aviation Engineers (Kiyevskiy institut inzhenerov grazhdanskoy aviatsii).
313. Scientific Research Institute of Applied Physics at Irkutsk State University (NII prikladnoy fiziki pri Irkutskom gos universitete).
314. Moscow Oncological Scientific Research Institute im Gertsen (Moskovskiy NI onkologicheskii institut im Gertsena).
315. Tbilis Branch of the All-Union Scientific Research Institute of Metrology im Mendeleyev (Tbilisskiy filial VNII metrologii im Mendeleyeva).
316. Dagestan Polytechnic Institute, Makhachkala (Dagestanskiy politekhnicheskii institut).
317. Saratov Polytechnic Institute (Saratovskiy politekhnicheskii institut).
318. Scientific Research Institute of Direct Current (NII postoyannogo toka).
319. Alma-Ata State Medical Institute (Alma-Atinskiy-gosudarstvennyy meditsinskiy institut).
320. Kaliningrad State University (Kaliningradskiy gos universitet).
321. Mogilev Branch of the Institute of Physics, AN BSSR (Mogilevskiy filial Institute fiziki AN BSSR).
322. Lower Volga Civil Engineering Surveys Trust (Nizhne-Volzhskiy tres inzhenerno-stroitel'skikh izyskaniy).
323. Leningrad Institute of Motion Picture Engineers (Leningradskiy institut kinoinzhenerov).

324. Physicotechnical Institute, Sukhumi (Fiziko-tekhnicheskiy institut).
325. Scientific Research Institute of Physics, Rostov-on-Don (NII fiziki, Rostov-na-Donu).
326. Institute of Radioelectronics, AN SSSR (Institut radioelektroniki AN SSSR).
327. Novosibirsk Electrotechnical Institut (Novosibirskiy elektrotekhnicheskiy institut).
328. All-Union Civil Engineering Correspondence Institut, Moscow (Vsesoyuznyy zaochnyy inzhenerno-stroitel'nyy institut).
329. Leningrad Scientific Research and Planning Institute of the Basic Chemical Industry (Leningradskiy NI i proyektnyy institut osnovnoy khimicheskoy promyshlennosti).
330. Microbiology Sector, AN AzSSR (Sektor mikrobiologii AN AzSSR).
331. Rovenskiy Pedagogical Institute im Manuil'skiy (Rovenskiy pedagogicheskiy institut im Manuil'skogo).
332. Frunze Polytechnic Institute (Frunzinskiy politekhnicheskiy institut).
333. Chernorechenskiy Chemical Combine, Dzerzhinsk (Chernorechenskiy khimicheskiy kombinat).
334. Scientific Research Institute of Applied Physical Problems at Belorussian State University (NII prikladnykh fizicheskikh problem pri Belorusskom gos universitete).
335. Institute of Electrochemistry, AN SSSR (Institut elektrokhimii AN SSSR).
336. Scientific Research Institute of Nuclear Physics, Electronics and Automation at Tomsk Polytechnic Institute (NII yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskoy institut).
337. Computer Center, AN SSSR (Vychislitel'nyy tsentr AN SSSR).
338. Ministry of Geology, USSR (Ministerstvo geologii SSSR).
339. Computer Center, AN ArmSSR (Vychislitel'nyy tsentr AN ArmSSR).
340. All-Union Scientific Research Institute of Light and Textile Machine Building, Moscow (VNII legkogo i tekstil'nogo mashinostroyeniya).
341. All-Union Scientific Research Institute of Heat Engineering in Metallurgy, Sverdlovsk (VNII metallurgicheskoy teplotekhniki).
342. Scientific Research, Design and Technological Institute of Heavy Machine Building, Ural Heavy Machinery Plant (NI konstruktorsko-tekhnologicheskoy institut tyazhelogo mashinostroyeniya Ural'skogo zavoda tyazhelogo mashinostroyeniya, NIITYaZhMASH Uralmashzavoda).
343. North Caucasus Scientific Center of Higher Education (Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly).
344. All-Union Scientific Research Institute of Economics of Mineral Raw Materials and Geological Exploration (VNII ekonomiki mineral'nogo syr'ya i geologorazvedochnykh rabot, VIEMS).
345. Institute of Physical Problems, Siberian Branch AN SSSR (Institut fizicheskikh problem SOAN).
346. Chuvash State University (Chuvashskiy GU).
347. Ukrainian Hydrometeorological Scientific Research Institute (Ukrainskiy NI gidrometeorologicheskoy institut).
348. Volgograd State Pedagogical Institute im Serafimovich (Volgogradskiy gosudarstvennyy pedagogicheskiy institut im Serafimovicha).
349. Donetsk Physicotechnical Institute (Donetskiy fiziko-tekhnicheskiy institut).
350. Institute of Applied Geophysics, AN SSSR (Institut prikladnoy geofiziki AN SSSR).
351. All-Union Scientific Research Institute of Physicochemical and Radiotechnical Measurements (VNII fiziko-khimicheskikh i radiotekhnicheskikh izmereniy).
352. Moscow Department of the Scientific Research Institute of Direct Current (Moskovskoye otdeleniye NII postoyannogo toka).
353. First Leningrad Medical Institute (Pervyy Leningradskiy meditsinskiy institut).
354. Moscow Medical Stomatological Institute (Moskovskiy meditsinskiy stomatologicheskoy institut).
355. All-Union Correspondence Institute of Mechanical Engineering (Vsesoyuznyy zaochnyy mashinostroitel'nyy institut).
356. All-Union Scientific Research Institute of Autogenous Machine Building (VNII avtogennoy mashinostroyeniya).

357. Ukrainian Scientific Research Institute of Metals, Khar'kov (Ukrainskiy NII metallov).
358. Institute of Problems of Strength, AN UkrSSR, Kiev (Institut problem prochnosti AN UkrSSR).
359. All-Union Scientific Research Institute of Transportation Construction (VNII transportnogo stroitel'stva).
360. Kazan' Mountain Astronomical Observatory (Kazanskaya gornaya astronomicheskaya observatoriya).
361. Institute of Physiology im Karayev, AN AzSSR (Institut fiziologii im Karayeva AN AzSSR).
362. Leningrad Pedagogical Institute (Leningradskiy pedagogicheskiy institut).
363. Kiev State Pedagogical Institute (Kiyevskiy gos pedagogicheskiy institut).
364. Institute of Machine Science, Moscow (Institut mashinovedeniya).
365. Odessa Hydrometeorological Institute (Odesskiy gidrometeorologicheskiy institut).
366. Institute of Linguistics im Potebin, Ukr SSR, Kiev (Institut yazykovedeniya im Potebina Ukr SSR).
367. All-Union Scientific Research Institute of Glass (VNII stekla).
368. Far Eastern Polytechnical Institute, Vladivostok (Dal'nevostochnyy politekhnicheskiy institut).
369. Krasnoyarsk Institute of Nonferrous Metals im Kalinin (Krasnoyarskiy institut tsvetnykh metallov im Kalinina).
370. Institute of Colloid Chemistry and Chemistry of Water, AN UkrSSR (Institut kolloidnoy khimii i khimii vody AN UkrSSR).
371. Odessa Higher Marine Engineering College (Odesskoye vyssheye inzhenernoye morskoye uchilishche).
372. Khabarovsk Branch of the All Union Scientific Research Institute of Physico-Technical and Radio-Technical Measurements (Khabarovskiy filial VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy).
373. All-Union Scientific Research Institute of Sea Fisheries and Oceanography (VNII morskogo rybnogo khozyaystva i okeanografii).
374. Ural Scientific Research Institute of the Pipe Industry (Ural'skiy NII trubnoy promyshlennosti).
375. Department of Polymer Physics, AN SSSR, Perm' (Otdel fiziki polimerov AN SSSR).
376. Kalinin State University (Kalininskiy GU).
377. Central High Altitude Hydrometeorological Observatory (Tsentral'naya vysotnaya gidrometeorologicheskaya observatoriya).
378. L'vov Electric Measuring Instruments Plant (L'vovskiy zavod elektroizmeritel'nykh priborov).
379. Gomel' State University (Gomel'skiy GU).
380. Odessa Polytechnical Institute (Odesskiy politekhnicheskiy institut).
381. Institute of Hygiene im Erisman (Institut gig yeny im Erismana).
382. Zaporozh'ye Machine Building Institute (Zaporozhskiy mashinostroitel'skiy institut).
383. Institute of Physicochemical Bases of Processing Mineral Resources, Siberian Branch AN SSSR, Novosibirsk (Institut fiziko-khimicheskikh osnov pererabotki mineral'nogo syr'ya SOAN).
384. All-Union Scientific Research, Planning and Design Institute of Metallurgical Machinery (VNI i proyektno-konstruktorskiy institut metallurgicheskogo mash nostroyeniya, VNIIMetmash).
385. Chernovtsy Department of Material Science of the Institute of Semiconductors, AN UkrSSR (Chernovitskoye otdeleniye materialovedeniya Instituta poluprovodnikov AN UkrSSR).
386. Leningrad Hydrometeorological Institute (Leningradskiy gidrometeorologicheskiy institut).
387. Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry, AN SSSR (Institut geologii rudnykh mestorozhdeniy, petrografii, mineralologii i geokhimii AN SSSR, IGEM).
388. Institute of History of Natural Science and Technology, AN SSSR, Moscow (Institut istorii yestestvoznaniya i tekhniki AN SSSR).

389. Yerevan Scientific Research Institute of Mathematics and Mechanics (Yerevanskiy NII matematiki i mekhaniki).
390. Novosibirsk Electrotechnical Institute of Communications (Novosibirskiy elektrotekhnicheskiy institut svyazi).
391. All-Union Scientific Research Institute of Analytical Instrument Manufacture, Kiev (VNII analiticheskogo priborostroyeniya).
392. Ust'-Kamenogorsk Road Building Institute (Ust'-Kamenogorskiy stroitel'no-dorozh. yy institut).
393. Sakhalin Complex Scientific Research Institute of the Far East Science Center, AN SSSR (Sakhalinskiy kompleksnyy NII Dal'nevostochnogo nauchnogo tsentra AN SSSR)
394. State Hydrological Institute (Gosudarstvenny gidrologicheskiy institut).